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104 articles of the Encyclopedia Britannica, eleventh edition, use was made of the symbols of the infinitesimal calculus. Only about one fourth of these articles could be classed as dealing with pure mathematics.

The statement that the great majority of the teachers of mathematical subjects in high schools are not informed as to " the ultimate educational values " of these studies, seems much exaggerated. Undoubtedly some of these teachers are not so informed, and the reason for it lies in the deficiency of their own mathematical training. The remedy for this lies in demanding a greater amount of preliminary study of mathematics as a qualification for the teaching of that subject in the high schools.

The suggestion that mathematics might be made more cultural by introducing purely descriptive courses in this subject, is in line with the effort in certain quarters to convert our high schools into kindergartens for students of high school age. The idea that mathematics could be " interpreted " to a student that never had a mathematical idea in his head, would be amusing if it were not advocated as a serious proposal.

DISCUSSIONS.

RELATING TO THE " SIMSON LINE " OR " WALLACE LINE."

By Roger A. Johnson, Western Reserve University.

(Cf. statement in this Monthly for June, 1915, p. 201, problem No. 467.)

It is a well-known theorem that the feet of the perpendiculars from a point to the sides of a triangle are collinear if and only if the point lies on the circumscribed circle of the triangle. This theorem has always been known as Simson's, and the line as Simson's line, until recent times, when an attempt has been made to replace Simson's name by that of Wallace. See, for instance, this Monthly, June, 1915, p. 201, problem 467. The purpose of this note is to submit the proposition that the name "Simson Line" should be retained. It would be desirable, perhaps, to have the views of readers of the Monthly on the matter.

Let us first determine the facts. Some thirty years ago, the inquiry was made as to where in Simson's works the theorem in question was to be found. Search was made, especially by that able investigator J. S. Mackay of Edinburgh, who read all known writings of Simson, without finding an allusion to the theorem. Further investigation persuaded him that the fact was discovered by one William Wallace about 1798; it seems to have appeared in print for the first time in that year, in Leybourn's Mathematical Repository.[1] Mackay also[2] traces the source of the erroneous ascription to Simson. Early in the century, Servois[3] cites the theorem, introducing it in the following words, " le théorème suivant, qui est, je crois, de Simson." A little later, Poncelet in his " Propriétés Projectives," 468, reproduced this statement without the qualification, and his authority was evidently sufficient to perpetuate the error. Certainly, until the last decade of the nineteenth century, no one doubted that the theorem was Simson's. Now, however, there seems no reason to believe that he ever heard of it.

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[1] Cf. Muir, *Proceedings of the Edinburgh Math. Society*, Vol. 3, p. 104.

[2] Mackay, *Proceedings of the Edinburgh Math. Society*, Vol. 9, pp. 83–91.

[3] Gergonne's *Annales de Math.*, Vol. IV, p. 250.

If, then, the theorem is Wallace's, should it not be given his name, in tardy recognition of the debt we owe him? After Mackay's researches had been published, he and other Scotch writers made the innovation, unwisely it seems to the present writer. At present, custom is divided. No author dares use one name without mentioning the other.

In any such situation, it is obvious that an attempt to effect a change from a universally established term to a new one will involve such an amount of confusion that we must convince ourselves that the advantages are sufficient to outweigh the inconveniences. The most powerful, and perhaps only reason for changing is that of justice, to assure to every discoverer the credit due him. This seems inadequate. In general, the fact that a theorem is named for a man is neither a sufficient indication that the theorem was discovered by him, nor, on the other hand, a definite characterization of the theorem. The classic example of an unjustly named theorem is Cardan's solution of the cubic, discovered, as is well known, by Tartaglia; several cases of the same kind will occur to the reader. On the other hand, the expression " Steiner's Theorem," for instance, may mean any of numerous familiar theorems. If, in particular, we continue to designate the line under discussion as Simson's line, or rather as the Simson line, we shall not be implying that it was discovered by Robert Simson, but that his name is attached to it by long-established custom.

There is, however, another reason for opposing the change, more cogent than this. The term " Wallace's line " already has a well defined meaning in another field of science, namely Zoögeography. According to Webster's New International Dictionary, it was named for Dr. Alfred Russel Wallace, and is " an imaginary line separating the Oriental and Australian regions. . . . The faunas on either side of the line are remarkably distinct." Now it is not likely that this line will be confused with the one mentioned in our theorem, but it would seem that since we are in a position to choose, the wisest choice is that which avoids all possibility of confusion.

CORRESPONDENCE.

To the Board of Editors:

Thinking in retrospect of the organization meeting at which the Mathematical Association of America was launched, I desire to congratulate you upon the very successful issues of the meeting, and upon the very auspicious beginning of the new Association.

One thought has occurred to me that I have not yet heard expressed. It relates to the toast on " The economic value of the young " to which Professor Hedrick so aptly responded at the luncheon tendered by the mathematics faculty of the University of Ohio. Now, economic considerations are of very vital import